Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Spectrum Policy Task Force Inquiry	)	ET Docket No. 02-135
	)	

COMMENTS OF THE LICENSE-EXEMPT ALLIANCE

The License-Exempt Alliance ("LEA"), pursuant to the Commission's *Public Notice* released June 6, 2002,[1] hereby submits its comments in response to the questions raised by the Commission's Spectrum Policy Task Force in the above-captioned proceeding.

As the Commission is aware, the LEA is a nationwide coalition of wireless Internet service providers ("WISPs") and equipment vendors who provide or support the provision of broadband service via license-exempt spectrum in the 902-928 MHz, 2.4 GHz and 5 GHz bands. The LEA is active in a number of Commission proceedings that directly or indirectly affect the license-exempt industry, and looks forward to participating in the Task Force's proactive effort to reevaluate and where necessary reform the Commission's spectrum policies, particularly those related to the license-exempt bands discussed above. The Task Force's inquiry will lay the groundwork for a meaningful reassessment of the Commission's regulatory framework for the license-exempt industry, and the LEA appreciates the opportunity to contribute to that process.

Although the *Public Notice* requests comment on a wide variety of questions that pertain in some fashion to license-exempt broadband service, at this time the LEA is most interested in responding to question 5 under the category of "Market-Oriented Allocation and Assignment

[1] "Spectrum Policy Task Force Seeks Public Comment on Issues Related to Commission's Spectrum Policies," DA-02-1311 (rel. June 6, 2002).

Policies." There, the Task Force asks whether more spectrum should be allocated for license-exempt service generally, whether the kinds of permissible license-exempt services should be expanded, whether there is a threat of spectrum congestion in the license-exempt bands and, if so, what should be done to eliminate that threat.[2] These are highly complex issues whose resolution will affect the license-exempt industry for years to come, and thus the LEA has created its own internal task force to research and prepare a detailed, comprehensive response that hopefully will prompt the initiation of more specific rulemaking proceedings in the near term. Due, however, to intervening industry activities, the relatively short comment cycle for this docket and the need to establish intra-industry consensus on the issues and sub-issues raised by the Task Force, the LEA has not had sufficient time to canvass its members and develop specific rule or policy proposals.[3] Pending submission of those proposals (which the LEA anticipates will be completed before the close of the Task Force's inquiry), the LEA will limit these comments to general observations about the license-exempt industry and related Commission rules and policies that appear to be the most viable candidates for reassessment and/or reform.

Above all else, the Task Force's inquiry should begin with a fundamental recognition that the Commission's rules and policies for license-exempt service have for the most part been an enormous success. Indeed, Commissioner Martin recently observed that users of license-exempt spectrum "illustrate how industry is adapting to make more and better use of the spectrum

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[2] *Public Notice* at 3.

[3] In particular, a substantial number of LEA members attended the Wireless Communications Association's annual convention in Boston during the week of June 23, and thus were not available to provide input as to what specific proposals the LEA should offer in this proceeding.

currently available, and harness spectrum once considered unusable."[4] This is due in no small part to the Commission's willingness to consider and implement rule changes that promote technological innovation within the license-exempt industry and deployment of area-wide license-exempt systems capable of delivering a variety of services to consumers.[5] The results speak for themselves: according to one internal industry study, there are now approximately 400,000 license-exempt broadband subscribers in the United States in nearly 3,000 communities (many of which are rural areas which have little or no cable modem or DSL service), with the number of subscribers expected to reach 2,000,000 by the year 2005.[6] Moreover, it is apparent that the phenomenon of wireless "hot spots" will continue to drive the growth of license-exempt broadband to unprecedented levels:

> With the economies of wireless backhaul Internet connectivity, WISPs are in an enviable position to drive wireless hot spots into completely new venues. One example is wireless hot spots near apartment buildings. A customer (especially if they're using Windows XP) turning on a laptop with 802.11b capability will be notified of the presence of the wireless hot spot. The customer can connect to the wireless hot spot and view the rates, and perhaps try the service. If the wireless hot spot provides faster or perhaps less expensive broadband service compared with DSL or a cable modem, that customer could be an easy sale. A WISP could offer the advantage of "in-system roaming" (free access from other

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[4] Ross, "Wireless LANs Look to Supplant Wireline Phones and 3G," *Wireless Week* (May 9, 2002), at http://www.wirelessweek.com/index.asp?layout=story&doc_id=85722&vertical.

[5] *See, e.g., Amendment of Part 15 of the Commission's Rules Regarding Spread Spectrum Devices*, ET Docket No. 99-231, FCC 02-151 (rel. May 30, 2002) (the "*Spread Spectrum Second Report and Order*"); *Amendment of Part 15 of the Commission's Rules Regarding Spread Spectrum Devices (First Report and Order)*, 15 FCC Rcd 16224 (2000); *Amendment of Parts 2,15,18 and Other Parts of the Commission's Rules to Simplify and Streamline the Equipment Authorization Process for Radio Frequency Equipment*, 13 FCC Rcd 11415 (1998); *In the Matter of Amendment of Parts 2 and 15 of the Commission's Rules Regarding Spread Spectrum Transmitters*, 12 FCC Rcd 7488 (1997).

[6] These statistics do not include users of license-exempt "freenets" and "hot spots." Due to the difficulties associated with compiling statistics on services not licensed by the Commission, the LEA believes that the actual number of license-exempt broadband subscribers in the United States may in fact be much higher.

> wireless hot spots served directly by the WISP), and that may well be enough of a compelling advantage to win the customer.[7]

By the same token, widespread deployment of license-exempt broadband services raises new regulatory challenges that must be addressed immediately if the Commission's prior success is to continue. *First*, the Commission must protect the spectrum it has already allocated for license-exempt service, and thereby eliminate any uncertainty as to whether WISPs will continue to have full and fair access to those frequencies. In this regard, the LEA applauds the Commission's recent rejection of the satellite radio industry's blunderbuss attempt to slash the out-of-band emissions limits for license-exempt services in the 2.4 GHz band.[8] The LEA urges that the Commission maintain a similar posture with respect to the recent attempt by Location and Monitoring Service ("LMS") licensees to limit or, in the alternative, completely eliminate any operation of license-exempt devices in the 902-928 MHz band.[9]

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[7] Stroh, "Tracking the Hot Spot Phenomenon," *Broadband Wireless Business*, at 9 (May/June 2002). "Hot spots" enable users to obtain broadband Internet access via wireless local area networks; the equipment deployed at hot spot locations almost always uses the IEEE 802.11b Wi-Fi standard. *Id.* at 8. Typically, hot spots are conceived as places for travelers to access the Internet when away from the office (*e.g.*, airport waiting areas, hotels, RV campgrounds, truck stops). As noted in the passage quoted above, however, hot spots have the potential to expand into other, less itinerant environments. *See* Bassuener, "Hot Spots Are Getting Hotter," *Wireless Week*, at 14 (June 24, 2002) (quoting statistics from In-Stat/MDR report indicating that the number of wireless local area network hot spots using 802.11b signals could jump from 2,000 this year to 42,000 worldwide by 2006).

[8] *Spread Spectrum Second Report and Order*, at ¶ 30.

[9] *See* Petition for Rulemaking of Progeny LMS, LLC, RM-10403 (filed March 5, 2002); Comments of Telesaurus, RM-10403, at 16 (filed May 16, 2002). As discussed in the LEA's comments on the Progeny Petition for Rulemaking, the 902-928 MHz band is becoming an increasingly important asset for WISPs due to its favorable propagation characteristics, particularly for "in-building" environments. For example, WaveRider Communications has developed award-winning, non line-of-sight, self-installable customer equipment for wireless broadband access in the 902-928 MHz band, which is used by more than 60 wireless broadband networks supporting thousands of users throughout the United States. Comments of the License-Exempt Alliance, RM-10403, at 3 n. 8 (filed May 15, 2002); *see also* Reply Comments of Ricochet Networks, Inc., RM-10403, at 3 (filed June 3, 2002) ("[I]t is the propagation characteristics of the 900 MHz band that allow the Ricochet technology to offer mobility to end users, including those using its services for public safety applications. Unlike the propagation characteristics of the 2.4 and 5 GHz ISM bands, data transmitted from a modem to a pole top radio in the 900 MHz band can penetrate a building's walls, glass or tree leaves. This, in turn, allows end users the ability to utilize the same modem inside and outside buildings throughout the coverage area of the Ricochet networks.").

Second, the Commission can and should attempt to find additional spectrum for license-exempt broadband service, subject to the historical requirement that license-exempt providers in any newly identified spectrum operate on a non-interference basis vis-à-vis licensed services. To that end, the LEA recommends that the Commission take immediate, favorable action on the recent proposal by the Wireless Ethernet Compatibility Alliance ("WECA") to permit Unlicensed National Information Infrastructure Devices to Operate in the 5.470-5.725 GHz band.[10] Clearly, the allocation of additional license-exempt spectrum at 5 GHz will facilitate higher system capacities and data rates, and thus will promote the development of fixed or nomadic metropolitan area networking applications. The LEA is currently working internally to identify additional candidate bands for license-exempt services below 2 GHz, where favorable propagation characteristics permit optimal coverage with lower power and, potentially, lower cost CPE.

Third, the Commission should revisit its Part 15 equipment certification rules and its policies for enforcement thereof. To the extent that those rules originally were designed for consumer devices that have little or nothing to do with broadband service (*e.g.*, cordless telephones, CB radios, electronic toys), they should be reassessed to ensure that they are not inhibiting development of new technologies or otherwise unduly delaying deployment of license-exempt broadband service. Furthermore, given the likelihood that broadband deployments in the license-exempt bands will increase significantly over time, it may be necessary for the Commission to revisit its "professional installation" requirement and adopt a mechanism (perhaps in partnership with the private sector) which assures WISPs and their customers that

[10] Petition for Rulemaking of the Wireless Ethernet Compatibility Alliance, RM-10371 (filed January 15, 2002).

license-exempt broadband systems are operating with properly certified components that have been installed in accordance with sound engineering practice.

Fourth, clarity in the Commission's Part 15 and Part 18 rules will be essential as the number of entrants into the license-exempt industry increases. Presently, many rule interpretations are issued on an *ad hoc*, informal basis either by the Commission's staff or its laboratory in Columbia, MD. While helpful on a case-by-case basis, this process invariably drains the Commission's limited resources and generally does not appear to be the most efficient means of imparting critical information to the license-exempt industry as a whole. Accordingly, the LEA is in the process of identifying those rules that its members believe are in greatest need of clarification, and will submit those rules for further discussion with the Commission's staff and, hopefully, a *Notice of Proposed Rulemaking* in the near term.

Again, the LEA looks forward to working with the Commission in this proceeding, in accordance with the comments set forth above.

Respectfully submitted,

LICENSE-EXEMPT ALLIANCE

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